

Amendments to the Claims :

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously presented) Coloration process for obtaining on the surface and/or in the interior of fired ceramic material a variation in the resultant colour of iron-based colorant solutions comprising:

(a) adding to a ceramic mix from 1% to 15% by weight with respect to the dry ceramic mix, precipitated silica and/or silica gel having an active surface $S \geq 100 \text{ m}^2/\text{g}$ at the moment of coloration, said active surface S being defined by the formula

$S = A \cdot Gr$, where:

Gr is the particle size fraction comprised between 5 and 60 microns for precipitated silica and between 1 and 60 microns for silica gel, and A is the surface area of the silica expressed in m^2/g measured by the B.E.T. method;

(b) applying to the surface of the additive-containing ceramic mix aqueous or organic solutions comprising inorganic salts of Fe(II) and/or Fe (III), or organic derivatives of Fe(II) and/or Fe(III);

(c) providing a variation in the resultant colour being equal to $\Delta E > 6$.

2. (Previously presented) The process as claimed in claim 1, further comprising adding to the ceramic mix precipitated silica and/or silica gel in a total quantity between 2% and 10% by weight of dry silica with respect to the dry ceramic mix.

3. (Previously presented) The process as claimed in claim 2, further comprising adding to the ceramic mix precipitated silica and/or silica gel in a total quantity between 3% and 7% by weight of dry silica with respect to the dry ceramic mix.

4. (Currently amended) The process for colouring ceramic materials as claimed in claim 1, wherein step (a) is implemented by adding precipitated silica and/or silica gel to raw materials or to a slip formed by grinding the raw materials.

5. (Previously presented) Additive-containing ceramic mix obtained according to step

(a) of claim 1.

6. (Previously presented) The coloration process according to claim 1, further comprising employing at least one additive-containing ceramic mix in an inhomogeneous admixture along with further ceramic mixes.

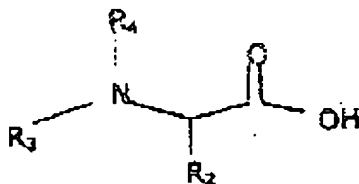
7. (Previously presented) An inhomogeneous mixture of ceramic mixes comprising at least one additive-containing mix as of claim 5.

8. (Previously presented) The process for colouring ceramic materials as claimed in claim 1, further comprising treating the additive-containing ceramic material with aqueous solutions containing from 0.1% to 20% by weight of iron (expressed as elemental Fe) in the form of inorganic salts of Fe(II) and/or Fe (III), or organic derivatives of Fe(II) and/or Fe(III).

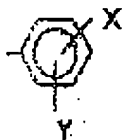
9. (Previously presented) The process for colouring ceramic materials as claimed in claim 8 wherein the organic derivatives of Fe(II) and/or Fe(III) are salts and/or complexes with organic compounds chosen from the group consisting of acetylacetone; ascorbic acid;

carboxylic acids of general formula $R_1\text{-COOH}$ and/or the sodium, potassium or ammonium salt thereof in which R_1 represents hydrogen, a benzene ring or a C1-C9 alkyl or alkenyl group possibly substituted with from 1 to 6 -COOH , -OH , NH_2 and/or -SH groups;

amino acids of general formula



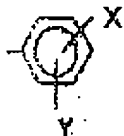
and/or a sodium, potassium or ammonium salt thereof where



$R_2 = -H, CH_3,$

where $X = -H, -CH_3$ and $Y = -H, -OH$

where R_3 and R_4 can be equal or different among each other and represent hydrogen, a C1-C4 alkyl group possibly substituted with $-OH$ groups,



$-(CH_2)_n-COOH$ where $n=1-3$, $-(CH_2)_m-NH_{(2-k)}-(CHR_5-COOH)_k$ in which $m=1-6$ and

$k=1$ or 2 , and where $R_5 = -H, CH_3,$
 $= -H, -OH.$

where $X = -H, -CH_3$ and Y

10. (Previously presented) The process for colouring ceramic materials as claimed in claim 9, further comprising using for colouring the additive-containing ceramic material, an aqueous solution of iron ammonium citrate containing 0.3% to 20% by weight of iron (expressed as elemental Fe).

11. (Previously presented) The process for colouring ceramic materials as claimed in claim 10, further comprising using for colouring the additive-containing ceramic material, an aqueous solution of iron ammonium citrate containing from 1% to 20% by weight of iron (expressed as elemental Fe).

12. (Previously presented) The process for colouring ceramic materials as claimed in claim 8, wherein the colorant solutions are aqueous solutions containing iron (II) ammonium sulfate, iron (II) sulfate, iron (II) chloride, iron (II) perchlorate, potassium hexacyanoferrate (II), potassium hexacyanoferrate (III) ammonium hexacyanoferrate (II).

13. (Previously presented) The process for colouring ceramic materials as claimed in claim 8, wherein the colorant solutions containing iron in the form of inorganic salts of Fe(II) and/or Fe (III), or organic derivatives of Fe(II) and/or Fe(III) also comprise inorganic salts and/or organic derivatives of metals chosen from the group: Co, Ni,

Cr, Ru, Au, Mn, Ti, Zn, Zr, Sb, V, W, Pd or their mixtures.

14. (Previously presented) The process for colouring ceramic materials as claimed in claim 13, wherein the colorant solutions contain 0.1-18.2% by weight of iron (expressed as elemental Fe), with a maximum cation concentration of 20%, and have a Fe/Me weight ratio between 15/1 and 1/5, where in the case of several metals different from Fe, Me means the sum by weight of the concentration of the different metals.

15. (Previously presented) The process for colouring ceramic materials as claimed in claim 14, wherein the colorant solutions contain 0.3-18.2% by weight of iron (expressed as elemental Fe), with a maximum cation concentration of 19.5%, and have a Fe/Me weight ratio between 13.9/1 and 1/5, where in the case of several metals different from Fe, Me means the sum by weight of the concentration of the different metals.

16. (Previously presented) The process for colouring ceramic materials as claimed in claim 1, further comprising the following operative steps:

- (a) adding precipitated silica and/or silica gel to the ceramic mix to be moulded in a quantity between 1% and 15%, preferably between 2% and 10%, more preferably between 3% and 7% by weight of dry silica with respect to the dry ceramic mix;
- (b) moulding the ceramic mix;
- (c) drying the moulded ceramic material;
- (d) treating the ceramic material derived from the preceding step with at least 2g/m^2 of colorant solution;
- (e) drying the ceramic material derived from the preceding step; and,
- (f) firing the ceramic material.

17. (Previously presented) The process for colouring ceramic materials as claimed in claim 16, wherein between step (c) and step (d), one or more intermediate steps (c') of pre-treating the dried material are carried out, using water or aqueous solutions of mono- or poly-carboxylic acids or of their salts.

18. (Previously presented) The process for colouring ceramic materials as claimed in claim 16, wherein between step (d) and step (e), one or more intermediate steps (d')

of post-treating the material previously treated with colorant solution are carried out, using water or aqueous solutions of mono- or poly-carboxylic acids or of their salts.

19. (Previously presented) The process for colouring ceramic materials as claimed in claim 17, wherein between step (d) and step (e), one or more intermediate steps (d') of post-treating the material previously treated with colorant solution are carried out, using water or aqueous solutions of mono- or poly-carboxylic acids or of their salts.

20. (Previously presented) The process for colouring ceramic materials as claimed in claim 16, wherein between step (d) and step (e), one or more intermediate steps (d') of post-treating the material previously treated with colorant solution are carried out, using aqueous solutions of inorganic salts.

21. (Previously presented) The process for colouring ceramic materials as claimed in claim 17, wherein between step (d) and step (e), one or more intermediate steps (d') of post-treating the material previously treated with colorant solution are carried out, using aqueous solutions of inorganic salts.

22. (Previously presented) The process for colouring ceramic materials as claimed in claim 18 wherein step (d') is carried out post-treating with aqueous solutions comprising mono- or poly-carboxylic acids or their salts, as well as inorganic salts.

23. (Previously presented) The process for colouring ceramic materials as claimed in claim 19 wherein step (d') is carried out post-treating with aqueous solutions comprising mono- or poly-carboxylic acids or their salts, as well as inorganic salts.

24. (Currently amended) Totally or partially decorated ceramic material obtainable in accordance with the process according to claim 1, wherein the silica in the form of granules and the surrounding ceramic material are both colored by the Fe-based solutions.

25. (Currently amended) Totally or partially decorated ceramic material obtainable in accordance with the process of claim 8, wherein the silica in the form of granules and the surrounding ceramic material are both colored by the Fe-based solutions.

26. (Previously presented) Decorated ceramic material as claimed in claim 24, further comprising subjecting the surface after firing to satinizing, smoothing, polishing or lapping.
27. (Previously presented) Decorated ceramic material as claimed in claim 26 comprising porcelain stoneware.
28. (Previously presented) Decorated ceramic material as claimed in claim 25, the surface of which has been subjected after firing to satinizing, smoothing, polishing or lapping.
29. (Previously presented) Decorated ceramic material as claimed in claim 28 which is of porcelain stoneware.